

Notice of Allowability

Application No.

10/646,607

Examiner

Rakesh K. Dhingra

Applicant(s)

ZHENG ET AL.

Art Unit

1763

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to Applicant's response dt: 12/28/06 to Final office action.
2. ☒ The allowed claim(s) is/are 5-7, 9, 10, 22-26, 38-41, 43 and 53-57.
3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☐ All b) ☐ Some* c) ☐ None of the:
 1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.

Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☐ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO/SB/08),
Paper No./Mail Date _____
4. ☐ Examiner's Comment Regarding Requirement for Deposit
of Biological Material
5. ☐ Notice of Informal Patent Application
6. ☐ Interview Summary (PTO-413),
Paper No./Mail Date _____
7. ☒ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____

Rakesh K. Dhingra

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EXAMINER'S AMENDMENT

An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Chen Liang on 2/5/07 and Paul Parker on 2/15/07.

The application has been amended as follows:

In the Claims:

5. (Currently Amended) The microfeature workpiece holder of claim 53 wherein the longitudinally extending member is a first longitudinally extending member and the gas delivery conduit is a first gas delivery conduit adapted to deliver a first process gas flow, further comprising a second longitudinally extending member and a second gas delivery conduit formed inside and carried by the second longitudinally extending member, the second gas delivery conduit being adapted to deliver a second process gas flow that is independent of the first process gas flow.

9. (Currently Amended) The microfeature workpiece holder of claim 53 further comprising a process gas supply conduit releasably coupled to the inlet of the gas delivery conduit.

22. (Currently Amended) A microfeature workpiece holder adapted to hold a plurality of microfeature workpieces, comprising:

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a first member having a plurality of slots as first workpiece supports spaced along a length of the first member, a plurality of outlets spaced along the length of the first member, and a lumen ~~internal to~~ formed inside and carried by the first member and coupling an inlet to each of the outlets, wherein each of the outlets is disposed between two adjacent workpiece supports, the slots being adapted to support the plurality of the microfeature workpieces in a spaced-apart and generally parallel relationship;

a second member having a plurality of slots as second workpiece supports that are generally horizontally aligned with corresponding slots on the first member spaced along a length of the second member, each of the second workpiece supports being positioned relative to one of the first workpiece supports to cooperatively support a workpiece;

and at least one cross-member joined to the first and second members.

25. (Currently Amended) The microfeature workpiece holder of claim 22 further comprising a process gas supply conduit releasably coupled to the inlet.

38. (Currently Amended) A microfeature workpiece processing system,

comprising:

an enclosure defining a process chamber;

a removable microfeature workpiece holder disposed in the processing chamber, the microfeature workpiece holder including:

a longitudinally extending member having a plurality of slots as workpiece supports spaced longitudinally along a length of the longitudinally extending

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member, the workpiece supports being adapted to support the plurality of microfeature workpieces such that the workpieces are in-a spaced-apart with their planar surfaces in a generally parallel relationship for processing; and

a longitudinally extending gas delivery conduit ~~internal to~~ formed inside and carried by the longitudinally extending member and having an inlet, a first outlet, and a second outlet spaced longitudinally from the first outlet, the first outlet being positioned to direct a process gas flow intermediate a first pair of the workpiece supports, the second outlet being positioned to direct a process gas flow intermediate a second pair of the workpiece supports; and

a process gas supply conduit coupled to the an inlet of the a gas distributor of the microfeature workpiece holder.

40. (Currently Amended) The microfeature workpiece processing system of claim 38 wherein the longitudinally extending member is a first longitudinally extending member and the gas delivery conduit is a first gas delivery conduit, and wherein the microfeature workpiece holder further comprises a second longitudinally extending member and a second gas delivery conduit ~~carried by~~ formed inside and carried by the second longitudinally extending member.

42. Cancelled.

53. (Currently Amended) A microfeature workpiece holder adapted to hold a plurality of micro feature workpieces for chemical processing, comprising:

a longitudinally extending member having a plurality of slots as workpiece supports spaced longitudinally along a length of the longitudinally extending

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member, the workpiece supports being adapted to support the plurality of microfeature workpieces such that the workpieces are with their planar surfaces in a spaced-apart and generally parallel relationship for processing; and

a longitudinally extending gas delivery conduit ~~internal to~~ formed inside and carried by the longitudinally extending member and having an inlet, a first outlet, and a second outlet spaced longitudinally from the first outlet, the first outlet being positioned to transversely flow a process gas intermediate a first pair of the workpiece supports, the second outlet being positioned to flow a process gas transversely flow intermediate a second pair of the workpiece supports.

56. (Currently Amended) The microfeature workpiece holder of claim 53 wherein the longitudinally extending member is a first longitudinally extending member and the gas delivery conduit is a first gas delivery conduit, further comprising a second longitudinally extending member and a second gas delivery conduit ~~internal to~~ formed inside and carried by the second longitudinally extending member.

Allowable Subject Matter

Claims 5-7, 9, 10, 22-26, 38-41, 43, 53-57 allowed.

Reasons for Allowance

The following is an examiner's statement of reasons for allowance:

Claims 22, 38, 53 – Prior art (US Patent No. 5,020,476 – Bay et al) does not teach claim limitation “gas delivery conduit/lumen disposed inside the longitudinally extending member/first member” in the context of remaining limitations of the claims.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Rakesh K. Dhingra whose telephone number is (571)-272-5959. The examiner can normally be reached on 8:30 -6:00 (Monday - Friday).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Parviz Hassanzadeh can be reached on (571)-272-1435. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



Rakesh Dhingra



RAM N. KACKAR, P.E.
PRIMARY EXAMINER